Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.9
An 528
Reserve

The EXTENSION ANIMAL HUSBANDMAN

UNITED STATES DEPARTMENT
OF AGRICULTURE
WASHINGTON,
D.C.

LIBRARY
MAY 15 1946

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

THE EXTENSION ANIMAL HUSBANDMAN

Issued quarterly by the Bureau of Animal Industry
and Extension Service, Cooperating.
C. D. Lowe, Senior Extension Animal Husbandman,
K. F. Warner, Senior Extension Meat Specialist.

Serial No. 49 -- -- March 1938

Special Articles in this Issue: Page

Regional Laboratories for the Improvement of Livestock, by Hugh C. McPhee 2

Purdue Starts New Cattle Improvement Project, by P. T. Brown 6

Thrifty Pig Work in North Carolina, by H. W. Taylor 8

Grazing Sheep on Logged-Off Lands in Western Oregon, by H. A. Lindgren 10

Ohio Sheepmen Study Parasites in 1937, by L. K. Bear 12

Keystone Gold Medal Colt Clubs in Pennsylvania, by C. A. Burge 14

Also:

North Dakota Holds Successful Lamb Show 5
Ton Litters in Indiana 5
Feed Market Reviews Available 9
Purebred Sire Placements in Arkansas 11
A Thought 13
Age of Horses Contest 15
New Specialist Appointed 15
Beef Cattle Investigations in the South 16
Nonrail Receipts of Livestock, 1937 17
Cold Storage Meat Curing in Arkansas 18
Soybeans for Hogs 18
Swine Investigations 19
New Picture Features Collie Dog 20
Just the Beginning 20
Your Dipper 20
Recent Publications 21

oOo

REGIONAL LABORATORIES FOR THE IMPROVEMENT OF LIVESTOCK

By Hugh C. McPhee,
Chief, Animal Husbandry Division,
U. S. Department of Agriculture.

- - -

Section 1 of the Bankhead Jones Act of the Seventy-Fourth Congress authorized the Secretary of Agriculture to conduct research into laws and principles underlying the basic problems of Agriculture in its broadest aspects. The act states that this research shall be in addition to that provided for under existing law, but it is understood that the two shall be coordinated as far as practicable. To carry out certain parts of the research program thus authorized, section 4 of the act provides for the establishment and maintenance of research laboratories and facilities in the major agricultural regions of the country.

The purpose of this article is to review the procedure followed in the establishment of these regional laboratories and to outline the type of problems to be studied in the laboratories established in the livestock field. While the ultimate purpose is to determine fundamental facts which can be applied in practice to the improvement of the livestock upon which so many of our citizens depend for a living, it must be appreciated that time is a necessary factor in obtaining these results. No phenomenal outburst of new methods or sensational development of new and superior strains of animals is going to occur over night. Research on fundamental principles of science underlying livestock improvement is a difficult task which tries the patience of even the best trained investigator not to mention the reactions of the layman. As new facts become available, we must expect that some of them will not be immediately applicable, but the history of progress in science shows time and again that some of the new facts do find practical application and the resulting benefits far outweigh the cost of all the research conducted to uncover them.

It must be made clear that these regional laboratories are not confined to abstract research on pure science. There are already known many principles of science which have never been applied adequately in the livestock field and the laboratory programs are being designed in consistency with this fact.

In the establishment of a regional laboratory the State agricultural experiment stations in the region agree upon a program of

research which is submitted to the Secretary of Agriculture for approval. When this program is approved, the laboratory is assigned to the Federal bureau having the major responsibility in that line of work, and a site for the central laboratory unit in the region is selected. The detailed research program is developed by a technical group composed of one representative from each cooperating State experiment station, the Federal bureau, the Office of Experiment Stations, and the director of the laboratory. The director and his staff then proceed to carry out the program.

Three laboratories for work with farm animals and one for the improvement of viability in poultry have already been approved by the Secretary and assigned to the Bureau of Animal Industry. The laboratory for the improvement of swine through the application of breeding methods was approved December 22, 1936, and has been established with headquarters at Ames, Iowa, with W. A. Craft as director. The laboratory for the improvement of sheep for western ranges was approved February 24, 1937, and is being established at Dubois, Idaho, with Julius E. Nordby as director. A laboratory devoted to animal disease research with B. T. Simms as director begins operation on April 1, 1938, at Auburn, Ala. A regional laboratory for the improvement of viability in poultry was approved on December 23, 1937, and only recently it was decided to locate this laboratory at East Lansing, Michigan.

The organization of the programs in these four laboratories shows considerable variation due to the nature of the problems being studied and the classes of animals being used as research material. In the swine and sheep laboratories the problems receiving attention at the start are much the same and deal with the application of genetic principles to the development of improved strains of animals. In the poultry viability laboratory the problem of first importance is the nature and control of fowl paralysis. This program will include a large amount of laboratory work, particularly in pathology. With swine the immediate need appeared to be facilities for carrying large numbers of animals rather than for more technical laboratory facilities. With the sheep there was a need for adequate laboratory facilities at a location where adequate summer and winter range was available for carrying large numbers of sheep.

The organization of these regional laboratories is being built around the primary needs of the problems to be attacked and varies from the extreme of centralization to decentralization. In the swine laboratory the animals themselves are the laboratory and no laboratory buildings have been built. Five of the 13 cooperating States have already started active work by each carrying one unit of

the program and it is probable that more will start work later. The Poland-China breed is being used in this work at the Iowa, Minnesota and Missouri stations; the Duroc-Jersey breed in Nebraska and Oklahoma; and in addition the Danish Landrace breed is being used at the Iowa station and the Danish Landrace and the Tamworth at the Minnesota station. In the development of improved strains, attention is being given to productivity of the sows, growth rate of the pigs, economy of gains and the quality of carcass. The first litters in the breeding program will be farrowed this spring.

The Western Sheep Breeding Laboratory will include a modest but well equipped laboratory for technical wool research and genetics and a new sheep barn. The fact that the research program of the laboratory is being coordinated with that of the Bureau of Animal Industry at this point has made it possible to take advantage of the land and other facilities for sheep already owned by the Department and thus develop a workable research plant in a much shorter time and at far less cost than otherwise. Because of the importance of Rambouillet sheep in the range country it has been decided to start the program with this breed and to develop closely bred strains, with particular attention to hardiness, yield and quality of wool and quality of lambs. The first breeding pens were selected last fall and the first crop of lambs will be dropped this spring.

The Regional Laboratory for the Improvement of Viability in Poultry is only in the process of organization. The program will include four phases: the genetic, the pathological, the nutritional and the management. Since the most pressing problem for study in this field is fowl paralysis, the program of the immediate future will consist of a coordinated genetic and pathological attack on this problem. As soon as possible attention will be given to the influences of nutrition and management on the incidence and control of the disease.

With the establishment of these four laboratories a research organization is being developed which should go far in solving many important problems affecting the welfare of the livestock industry. The programs in these laboratories are integrated with related research being conducted in the State experiment stations and in the Department. Every effort is being made to take advantage of all available facilities and talent to promote progress. Lack of numbers, discontinuity, high cost per unit and inadequacy of equipment which are so often mentioned as barriers to the research worker in the large-animal field are thus being removed and the pressure of an integrated and well-coordinated research program in the hands of competent workers is being brought to bear on the situation. It may be stated that as the work undertaken by the regional laboratories progresses some phases of the program may be extended to include

close cooperation with livestock breeders and farmers. This will be true particularly of the phases devoted to breeding and diseases. Real progress toward the discovery of significant facts should result from these efforts.

----------oOo----------

NORTH DAKOTA HOLDS SUCCESSFUL LAMB SHOW

A commercial fat lamb show of somewhat different character was held at the West Fargo stock yards in that State on September 27, 1937. It was sponsored by the North Dakota Sheep Breeders' Association and had the support of the State extension service.

A total of 610 fat lambs owned by 122 growers from 16 counties were exhibited and sold. The lambs were shown in lots of 5 head. The unique feature of the show was that the lambs were graded individually on the basis of U. S. Standard specifications and were sold by grade without respect to ownership. No other presale appraisal was made.

The grading, which was done by W. O. Fraser of the U. S. Bureau of Agricultural Economics, resulted in 320 of the lambs grading Prime, 110 Choice, and 180 Good. The Prime lambs sold for $10.60 per hundredweight, the Choice lambs, $10.25, and those grading Good at $9.25. The selling was by auction. The stock yards company awarded premiums of $1.00 per head on the Prime lambs, 75 cents on those grading Choice and 50 cents on the third grade.

An educational program, including demonstrations, exhibits, and talks was conducted as a part of the event. Following the selling of the lambs an auction sale of 50 head of purebred rams was held. Prior to sale these rams were judged by Al Severson and James Gannaway of the college animal husbandry department. Approximately 500 persons attended and viewed the grading and selling operations. The entire event was considered an outstanding success and plans are under way for a second effort this coming fall. Howard G. Lewis, now extension animal husbandman in Montana, took the lead in promoting the project for the North Dakota extension service.

----------oOo----------

TON LITTERS IN INDIANA

The Hoosier Ton Litter Club had an enrollment of 368 members in 41 counties. Its members produced 101 litters which weighed 2,000 pounds or more at 6 months of age, 31 litters weighing 1,800 to 2,000 pounds, and 29 litters weighing 1,600 to 1,800 pounds. The first ton-litter club show was held at the Indianapolis Stock Yards with 36 high-class litters on exhibition. A demand for district ton-litter shows is developing. --From Indiana Annual Report, 1937.

----------oOo----------

PURDUE STARTS NEW CATTLE-IMPROVEMENT PROJECT

By P. T. Brown, Extension Animal Husbandman,
Purdue University

- - -

There were 203 Indiana beef-cattle farmers in 21 different counties who nominated 587 head of their 1936 calves in the 1937 Hoosier Gold Medal Calf Club. This was the first year for this new adult extension project which is sponsored by the Purdue University agricultural extension department, in cooperation with the Indiana Livestock Breeders' Association.

The objects of this new cattle-improvement project are to demonstrate (1) proper methods of feeding and developing beef calves, and (2) the importance of using high-class bulls.

The calves fed in this project may be either purebred bulls, purebred heifers or commercial steers and heifers of any of the beef breeds. Each calf must have been sired by a registered beef bull. The calves of any calendar year are nominated by the owner during January of the following calendar year. No weight is taken at the time of nomination but a weight is required to be taken any day during July following nomination. When this weight is taken, each calf must weigh at least 2 pounds for each day of age, plus 70 pounds which is arbitrarily considered the birth weight. Exception to this weight rule is made only in the case of purebred heifers. They are required to show a weight of 1.75 pounds for each day of age, plus the 70 pounds for birth weight.

All the calves of a county that make these required gains are then brought together for the county gold medal calf show. Those that fail to make the required gains are automatically dropped from the club. The county agent and the county cattle committee organize the county show in such a way that calves of different breeds and sexes show in different classes. If there are enough calves to permit further division, they may be classified and shown by ages such as junior yearlings, summer yearlings and senior calves. In all these county shows, it is a standing rule that no single class can be recognized unless it contains at least four calves that have made the required gains. Medals are awarded the cooperators on the basis of the placing of their calves in their respective classes. For instance, in a class that contains the minimum of four calves, the calf which is placed first qualifies for a gold medal, the second calf a silver medal, and the third calf a bronze medal, while

the fourth-place calf will receive no medal. The number of medals is increased in those classes having more than four calves so that about three-fourths of the calves qualify for medal awards.

In addition to the showing and judging of the calves as above described, there is also provision for a get-of-sire class in each county show. Each cooperator, who has three calves by one sire in the show, may put the three together and show them as a "get" in competition with similar groups by other sires. In these get-of-sire classes, there must be at least four "gets" in each class, and the medal awards are distributed in the same way as in the single-calf classes.

The first year's experience with this new project has been quite satisfactory. As previously stated, 21 counties took up the project and nominated a total of 587 calves. There were 174 Angus, 139 Hereford, 4 Red Polled and 270 Shorthorn calves nominated.

Fifteen of the original 21 counties completed the project by holding shows. In these shows, Angus calves won 40 medals, Herefords 21 and Shorthorns 61, or a total of 122 medals.

In addition to the 587 calves nominated, there were also 60 different herd bulls nominated for the get-of-sire awards. There were six bulls that qualified for medals, two receiving gold, two receiving silver, and two others receiving bronze medals.

To further emphasize the value of good breeding bulls, we rate or score each bull represented in the club on individuality, giving him a certain rating and additional points for any medals won in the get-of-sire classes. The high-scoring Shorthorn bull was Whitecroft Pilot, owned by J. K. White, of Hamilton County, with 100 points; the high-scoring Angus bull was Baccarat of St. Albans, owned by J. A. McHargue & Son, of Parke County, with 60 points; the high scoring Hereford bull was Bright Domino 4th, owned by Grover Schuman, of Whitley County, with 45 points.

During the course of the project, meetings and tours are held in the various counties. Breeding, feeding, management, and judging of beef cattle constitute the basis for discussions and demonstrations in these meetings. Purebred and commercial herd owners are showing considerable interest in this work as an improvement project.

Nominations for the 1938 club were taken during January. Our records show that 685 calves have been nominated by 199 cooperators in 23 counties.

----------oOo----------

Education is not to teach people to know what they do not know, but to behave as they do not behave. --Ruskin

----------oOo----------

THRIFTY-PIG WORK IN NORTH CAROLINA

By H. W. Taylor, Extension Swine Specialist,
North Carolina State College of Agriculture.

- - -

During the period Sept. 30, 1936, to Mar. 15, 1937, one hundred fourteen thrifty-pig schools were held in North Carolina with a total attendance of 11,967 persons. Schools were held in 95 of the 100 counties in the State. The county agents made arrangements for the schools, and where they were conducted in the day time local theater managers donated the use of their buildings or other buildings that could be darkened were used. The teachers of vocational agriculture cooperated in many cases by bringing their boys to these schools. The school usually lasted for about two hours and the first part of the program consisted of discussions. These discussions were led by the writer and Dr. A.A. Husman, inspector in charge of the North Carolina office of the U. S. Bureau of Animal Industry. Dr. Husman handled the part that dealt with internal parasites.

The meetings often developed into round-table discussions, and all of them were conducted in an informal way. After the discussion was completed two motion pictures were shown. These pictures were obtained from the U. S. Department of Agriculture and were entitled "Control of Worms in Hogs" and "How to Grow Hogs." Copies of United States Department of Agriculture Leaflet No. 5, "The Prevention of Roundworms in Pigs," were distributed to those who attended the schools. Before the meeting adjourned the county agent gave the farmers an opportunity to volunteer to conduct thrifty-pig demonstrations.

In most cases definite arrangements for demonstrations were made at the schools. Because of the large territory covered, and the press of other duties, it was impossible for the writer to get back and assist with the individual demonstrations. However, the county agents were furnished with copies of instructions on how to handle the sows and pigs from before farrowing time until the pigs weighed 100 pounds. Sufficient copies were provided to enable the county agent to furnish each demonstrator with a detailed copy. County agent Goodman, of Cabarrus County, reported that F. A. Barnhardt, one of his farmers, conducted a very successful thrifty-pig demonstration on his farm. An acre of clean ground was fenced off and sowed in soybeans and Sudan grass in the spring. Before the sow farrowed, she was moved to this new pasture and the pigs grazed on these crops from the time they were three weeks of age until they were marketed. Mr. Barnhardt reported that this was the finest

lot of pigs he ever raised and that he expects to raise all his pigs by this method in the future.

County agent Morrow of Iredell County, conducted a demonstration at the Iredell County Home farm, which included 20 pigs farrowed by three sows. Mr. Morrow reported that these pigs were fed out on red clover and lespedeza sod, and at 7 months weighed an average of 312 pounds, which was 15 pounds more than the same sows' preceding litters that were six months older.

County agent Harris of Tyrrell County, reported that 15 farmers in his county raised 603 thrifty pigs from 93 litters. Mr. Harris said that these growers reported that they raised the best pigs in their experience as hog raisers.

W. A. Davis, a farmer of Johnston County, reported that he put one sow on a clean field and left his other sows in the old hog lot. All the sows farrowed pigs during the same week in April and in July he reported that the pigs on the clean land were twice as large as those in the old hog lot. In addition Mr. Davis reported that he lost 25 percent of the pigs farrowed and raised in the old hog lot from worms and diseases and that he lost none of the pigs raised on the clean ground. In this case the same man fed all the hogs during the entire period and fed them about the same amount of feed.

Our growers are manifesting an increased interest in the swine sanitation plan.

----------oOo----------

FEED MARKET REVIEWS AVAILABLE

The Bureau of Agricultural Economics issues numerous regular and special releases on feed supplies, prices, etc., which have value to livestock extension workers. Such reports are available to members of this group on request. Applications should be addressed to the Bureau of Agricultural Economics, U. S. Department of Agriculture, Washington, D. C.

Among the reviews issued are the quarterly reports on feed grain supplies, the special monthly reports on the feed situation, the weekly grain market review, the weekly feed market reviews, and occasional special reports when the situation warrants them.

It is suggested that those interested in receiving such information regularly file their requests as indicated. --C. D. L.

----------oOo----------

It cannot be too often repeated that it is not help but obstacles - not facilities, but difficulties, that make men. --W. Mathews

----------oOo----------

GRAZING SHEEP ON LOGGED-OFF LANDS IN WESTERN OREGON

By H. A. Lindgren, Extension Animal Husbandman,
Oregon State College.

- - -

The original stand of timber on the western Oregon hills was once one of the finest in the nation. Much of it has been harvested, and the use of the cut-over lands from whence it came is rapidly becoming a serious problem.

In proper land use, the social-economic structure in these counties has, in the past, been very largely based upon timber values. As these values have diminished, the county tax structure, especially, has been seriously threatened through ever-increasing acreages of cut-over lands reverting to the counties for taxes. For this reason, some planned income-producing use of these lands, pending the possible restoration of a new forest, is extremely important.

The counties have considered the possibility of the use of this land for the grazing of livestock. These lands, after being logged, are burned over in order to remove as much as possible of the debris that has accumulated during logging operations. If good grass mixtures, containing permanent varieties, are seeded following the burning, an excellent stand of grass results. If this seeding is not done, the land is soon covered with weeds, browse, legumes of various kinds, and other plants, completely occupying the ground. Where the land has been seeded to grass the carrying capacity is high; on the other hand, where it is not seeded, some livestock can be grazed on the weeds and browse that come in following logging.

In the eastern Oregon wheat-producing areas, there are large holdings of grazing land suitable for fall and spring grazing. This is utilized by the wheat men with range sheep. These folks have no place to go with their sheep during the summer time, so they became interested in this logged-off land in western Oregon and move their sheep down the first of May and leave them there until the rain drives them out in the fall.

There are other operators in certain counties who purchase this land and seed it to grass. They buy coarse and medium wool sheep and maintain them on these ranges the year round. In the case of the eastern Oregon fine wool sheep, however, this cannot be done,

as they are not well adapted to the wet weather conditions that prevail in the coast area.

The extension service has been actively concerned with the proper use of this land and has attempted to bring the men who need summer grass and the timber companies and county courts having logged-off land together in an attempt to work out a balanced program.

During 1935, some 25,000 sheep were grazed on lands that had not been seeded to grass. Close observation was made by the extension service throughout the season in an attempt to gather as much information as possible, both as to management and carrying capacity.

It was found that under proper management, the better outfits sold 75 percent of lambs off this range by July 15 as fat lambs. Others, not having such good ewes, produced feeder lambs of very good quality. Their weight ranged from 55 to 75 pounds. It was found that it required about 4,000 acres to carry a band of 1,200 ewes through the summer. During the season of 1937, some 16,000 sheep in one county were grazed on similar lands with better results due to the fact that the sheepmen had learned how to handle their ewes on that type of land. During 1937, the average lamb weight at the time the lambs were sold ranged from 71 to 76 pounds. There was a fat end amounting to about 25 percent and the remainder were very high quality feeders, and well liked by the feed lot operators in the district.

It is estimated that there is room for approximately 100,000 sheep in the northwest counties of Oregon. In the southern part of the State, namely Coos and Curry Counties where the sheep are run on grass the year round, it is possible to carry a ewe to the acre. The operators in this section feel that they can make a very satisfactory living on from 500 to 1,000 ewes on this type of range. Here again coarse or medium wool breeds are preferred.

Following a rather disastrous fire in 1936, some 15,000 acres of burned-over lands were seeded to grass by airplane. In 1937 this made an exceptionally good growth and furnished feed for a large number of livestock. It is felt that this development will grow to a larger extent during the next few years, and will play a very important part in the livestock grazing program, as well as provide a balanced land use program thereby improving the tax structure in the areas where timber has been removed.

----------oOo----------

PUREBRED SIRE PLACEMENTS IN ARKANSAS

County agricultural agents report the following numbers of purebred sires placed in 1937: Beef bulls, 776; rams, 196; boars, 307; stallions and jacks, 74. --From Arkansas Annual Report, 1937.

----------oOo----------

OHIO SHEEPMEN STUDY PARASITES IN 1937

By L. K. Bear, Extension Animal Husbandman,
Ohio Extension Service.

- - -

The problem of producing good market lambs and quality wools depends on a year-round program of breeding, feeding, and management. There is no short cut, and one phase is never a substitute for the others. Parasites proved a particularly difficult problem in 1937. Worms of one kind or another kept many market lambs out of the better grades and were the hurdle preventing many others from reaching the market. Some of Ohio's oldest sheepmen cannot remember a season as trying as the year just closed. Central Ohio enjoyed but five days of sunshine in June. The wet and cloudy weather in early summer gave young parasites infesting the pastures a good break. By late June and early July, the owners of late lambs opened a series of complaints that became a chorus as the summer wore on. "Timely Sheep Topics," a circular for Ohio flock owners which is sent regularly to 6,000 farmers in 21 counties, suggested parasite treatment during the summer. Death losses were severe among lambs and some ewes were lost. Few owners indeed were able to get lambs to market on time and in good condition.

A concerted effort was made to get flocks in an improved condition before winter. The Ohio Wool Growers' Co-operative Association joined with the extension service in a series of demonstrations in 21 counties. A method long used in Ohio on the parasite problem was employed -- the posting and treating demonstration. L. A. Kauffman, secretary of the wool growers' cooperative, who is also in charge of the organization's educational and field program performed post-slaughter examinations on sacrificed specimen sheep at each meeting. Mr. Kauffman was formerly sheep extension specialist at the Ohio State University. A demonstration of preparing and administering the various treatments followed. A valuable part of the program at these demonstrations was the invitation to the crowd to "practice on the other fellow's sheep," always accepted by a goodly group.

Work in corn fields was deserted by farmers interested in information on parasites. Hookworms, tapeworms, and all the rest, are described in the literature, but it seems easier for the flock owner to understand a life cycle and feeding habits if described to him by a man wearing overalls who actually produces a

specimen of the worm "alive and breathing" while the explanation is going on. Forty-eight animals from as many different flocks in various parts of the State were posted. During the fall months 58 meetings, attended by 1,775 farmers, were held. Nodular worms, hookworms, tapeworms, stomach worms, whipworms, and often lung worms were encountered. The smaller parasites, of course, can hardly be seen without the aid of laboratory equipment.

Immediately before slaughter, the sheep used in the demonstrations were treated with tetrachlorethylene capsules, combination copper sulphate-nicotine sulphate drench (plus dye), as well as with various solid pills sold for treating sheep for parasite control. This preliminary phase of the demonstrations made it possible to demonstrate the function of the esophageal groove and the advantage of treating with liquids.

Under Ohio conditions control through pasture changes alone is beyond the reach of most farmers. Some other method is not only desirable but during years of wet weather, very necessary. A routine of treatments has been recommended as follows: Tetrachlorethylene capsules - May and November; combination copper sulphate-nicotine sulphate drench - June, July, August, September, and October. During extremely wet years a third tetrachlorethylene capsule has been suggested as a substitute for the August drench.

Many Ohio sheepmen have experienced losses due to the fact that they have considered "stomach worms" the principal, if not the only intestinal parasite in sheep. Some animals posted in demonstrations had been frequently treated with copper sulphate solution, yet were badly run-down and infested with hookworms and nodular worms.

On every occasion flock owners have been cautioned not to give formulae for preparing drenches by word of mouth or by telephone. Printed cards with complete instructions are available through the courtesy of the Ohio Wool Growers' Co-operative Association. The man who has never treated is usually afraid to attempt the job because of a death loss encountered by a man who quite likely failed to heed the few simple precautions.

----------oOo----------

A THOUGHT

In order that livestock producers may have the full benefit of research in the utilization of increased proportions of pasture and forage in their production practices, it appears that studies on the problems involved must not be limited to animals, which in type, are primarily the product of the opposite kind of economy.

----------oOo----------

Education is the ability to think, to act, and to appreciate.
--Brigham Young

----------oOo----------

KEYSTONE GOLD MEDAL COLT CLUBS IN PENNSYLVANIA

By C. A. Burge, Extension Livestock Specialist,
Pennsylvania State College,

- - -

Thousands of horses are being shipped into Pennsylvania annually and at high prices. At the present time draft horse prices are such that Pennsylvania farmers find raising of good draft colts very profitable.

The horse is a source of power produced on the farm and the fuel, or feed, for him is produced on the farm at relatively low cost. The increased interest on the part of many Pennsylvania farmers in the draft horse has encouraged the use of good breeding stock. With the revived interest in breeding of better animals have come the better feeding and management of colts and young stock. This tends to develop pride in good horsemanship, essential to success in horse production.

The Keystone Gold Medal Colt Club is one of the main horse projects in Pennsylvania extension service. This project has met with approval in many counties and has been an adult project thus far. Boys and girls are becoming very much interested in colts and horses and this year 4-H colt clubs will be organized for the first time.

This year 20 counties have organized colt clubs with over 650 colts enrolled. There is more interest in horses at the present time than for several years. Men are becoming more and more interested in horses as a source of economical power, as well as from the sales side. Colt and horse numbers well warrant a constructive breeding program and the colt club is one method followed to better the horse stock, as well as to encourage a more extensive breeding program. The colt club has served to stimulate more interest in good horses by arousing in the farmer a pride of ownership of good colts, and in the stallion owner, a pride in being the owner of a stallion siring the best colts in the community.

The objects of the colt club project are -

1. To encourage more owners to breed to better stallions.
2. To encourage colt owners to feed more liberally the first year, as that is the critical period of the colt's life.
3. To encourage better systems of management, (trimming feet, and training the colt to halter and for show).
4. To hold round-ups or shows, and demonstrate results of better breeding, feeding, and management.

----------oOo----------

AGE-OF-HORSES CONTEST

The Wisconsin extension service is conducting contests on the determination of the age of horses by examining the teeth. Its objects are to familiarize farmers with the usual method of telling age in horses and to protect them against misrepresentation of age in market horses. The method of conducting such a contest is set forth as follows:

Provide 8 to 10 horses of different ages and have them arranged in a row all facing the same direction. They may be tied to a picket line or held at halter in a row so that each horse's mouth may be examined individually. Each horse should be given an identification number.

Explain the usual method of telling age of horses by their teeth, using the guide sheets provided. Give each person taking part a small card on which to write his name and to record by number his estimate of each animal's age.

Select two men experienced in telling age of horses to act as judges, one a veterinarian if possible. These men will, by themselves, examine the horses and agree upon the official age of the animals by means of which the contestant's cards will be rated.

As soon as those taking part mark their cards they will hand them to a clerk who will assist the judges in rating the cards and naming the three contestants who give the correct age on the largest number of horses.

While the cards are being corrected one of the judges will examine the mouth of each horse and explain the age of each animal.

Further information may be obtained from J. G. Fuller of the Wisconsin extension service.

----------oOo----------

NEW SPECIALIST APPOINTED

Dr. J. W. Bennett, a veterinarian, has been appointed assistant to W. H. Tolbert, who is leader of the animal husbandry project in New Mexico.

----------oOo----------

A better practice may have been sired by Research, but its dam was Necessity. Furthermore, it was probably pastured on Demonstration and self-fed on Publicity. --Rex Beresford

----------oOo----------

BEEF CATTLE INVESTIGATIONS IN THE SOUTH

At the Iberia Livestock Experiment Farm, Jeanerette, La., in cooperation with the Louisiana Agricultural Experiment Station, in a cross-breeding experiment with Brahman, Africander, and Aberdeen-Angus cattle, cross-bred calves in general continued to make more rapid growth than the purebreds. It also appears that a predominance of blood of a strictly beef-bred animal such as the Aberdeen Angus is desirable in the cross-bred having Brahman blood.

In record-of-performance studies at Jeanerette there is some indication that the cross-bred calves use feed more efficiently but do not produce such high-quality carcasses at a slaughter weight of 750 pounds as the purebred Aberdeen Angus.

In a steer-fattening experiment at Big Spring, Tex., in cooperation with the Bureau of Plant Industry and the Texas Agricultural Experiment Station, steers full-fed ground milo heads made greater gains, dressed a higher percentage, and were significantly higher in carcass grade than steers fed only limited quantities. The full-fed steers were also more profitable, selling at approximately $1 per hundredweight higher and returning approximately $7 more per head than the limited-fed steers.

At Spur, Tex., in cooperation with the Texas Agricultural Experiment Station, a study to determine the carotene requirement of fattening beef steers indicated that night blindness was the first general indication of vitamin A deficiency to appear when the supply of carotene was insufficient. After vitamin A deficiency occurred, it was found that 275 to 385 micrograms of carotene in alfalfa hay per 100 pounds of live weight daily was too low to maintain health and normal gain. There was evidence that the 900 micrograms of carotene per 100 pounds of live weight is enough to carry steers through a long fattening period without marked indication of vitamin A deficiency, although on this level night blindness did not entirely disappear. Eye and nerve tissues from steers that showed disturbed vision are being examined for the presence of pathological changes.

Mineral-deficiency investigations in cooperation with the Texas Agricultural Experiment Station were begun in southern Texas in the spring of 1937. Analyses of forage samples and cattle observations made thus far indicate that a rather pronounced phosphorus deficiency exists in most of the pastures studied.

--From Report of the Chief, Bureau of Animal Industry, 1937.

----------oOo----------

Knowledge of itself does not influence conduct. It must serve some drive or urge before it does so. --Symonds.

----------oOo----------

NONRAIL RECEIPTS OF LIVESTOCK, 1937

The following table gives the "drive-in" (nonrail) receipts of livestock in 1937 at 17 principal markets, also the percentage such receipts were of the total receipts. Total nonrail receipts at the listed markets made up 52.05 percent of the total receipts at these markets.

Market	No. head "drive-ins"	Percentage of total receipts
St. Paul.....	2,870,443	65.13
Chicago.....	2,804,476	31.74
East St. Louis....	2,743,781	55.95
Indianapolis.....	2,395,543	94.41
Fort Worth.....	2,119,881	69.92
Omaha.....	1,952,719	47.00
Sioux City.....	1,546,449	73.35
Kansas City	1,230,956	32.65
St. Joseph.....	1,101,238	56.52
Cincinnati.....	1,091,708	71.13
Oklahoma City.....	1,021,716	87.44
Milwaukee.....	784,712	63.78
Wichita.....	623,513	78.88
Louisville.....	566,868	76.88
Denver.....	562,290	13.74
Sioux Falls.....	503,792	97.23
Portland.....	240,330	37.19
Total	24,159,415	52.05

Based on total reported receipts at the above markets, the percentage of each class of livestock listed as "drive-ins" was as follows - Hogs, 70.84 percent; calves, 65.00 percent; cattle 52.39 percent; and sheep and lambs, 30.06 percent.

Complete data on this subject are contained in a mimeographed publication which may be obtained from the U. S. Bureau of Agricultural Economics, Washington, D. C.

----------oOo----------

"Teaching is setting up conditions within the mind which enable the learner to make a change in his process of either thinking or acting."

----------oOo----------

In any effort to improve conditions in which the human element is involved it is always well to start with you. Are you a part of the problem or are you a part of the solution? --The Oxford Group.

----------oOo----------

Scientific writing is at its best when it not only can be readily understood, but also cannot be misunderstood. --D. S. Burch

----------oOo----------

COLD STORAGE MEAT CURING IN ARKANSAS

The program of custom curing pork for farmers by cold storage and ice companies was begun five years ago in connection with a series of meat cutting and curing demonstrations for county agents. K. F. Warner, senior extension meat specialist from the Washington office, assisted in these demonstrations and also with a school for managers and operators of the curing plants in 1935 and again with a survey of problems and conditions affecting the program in the fall of 1937. We feel that the project is definitely established and at this time are anxious to correct and improve the practices involved and to encourage more and more farmers to avail themselves of the service. During the 1937 survey tour, conferences were held with the owners and operators of seven plants, the county agents concerned and a selected group of farmer patrons.

In the 1936-37 season slightly more than 1,100,000 pounds of hams, shoulders, bacon and loin strips were cured in 32 plants. This was a slight increase over the previous season. Two new plants offered curing service at the beginning of the present season, which with a somewhat lower price for hogs on foot, larger feed supplies, and a better understanding of the program, should result in an even larger volume of meat cured during the 1937-38 season. --From Arkansas Annual Report, 1937.

----------oOo----------

SOYBEANS FOR HOGS

A 4-year study with the North Carolina Agricultural Experiment Station on methods of feeding soybeans to pigs for the production of firm pork was completed during the year. Pigs with initial weights of approximately 60 pounds were fed rations containing 30, 40, and 50 percent of soybeans, with yellow corn, tankage, alfalfa leaf meal, and a mineral mixture. From approximately 100 to 225 pounds of weight, all pigs were fed the same ration of yellow corn 75 percent, cottonseed meal 13 percent, tankage 5 percent, alfalfa leaf meal 5 percent, and mineral mixture 2 percent. With only a few exceptions, the chilled carcasses of all were of satisfactory firmness. --From Report of the Chief, Bureau of Animal Industry, 1937.

----------oOo----------

We cannot change the world by changing systems; we can only change it by changing lives. --Rufus M. Jones

----------oOo----------

SWINE INVESTIGATIONS

A study of pork-producing efficiency of pigs of Danish Landrace breeding was continued. Pigs in this study were self-fed a standard ration in dry lot from 72 days of age for the spring pigs and 70 days of age for the fall pigs to weights of approximately 225 pounds.

Sixteen spring litters and thirteen fall litters of Landrace pigs averaged 9.6 pigs per litter at farrowing and 5.2 pigs at weaning. The spring pigs gained at the rate of 1.10 pounds daily and required an average of 368 pounds of feed per 100 pounds of gain, whereas the fall pigs gained 1.31 pounds daily and required an average of 356 pounds of feed per 100 pounds of gain. The range between low- and high-feed requirements for the spring pigs was 113 pounds of feed and for the fall pigs was 59 pounds. The lowest feed requirement for any one group of spring pigs was 334 pounds of feed per 100 pounds of gain and for any one group of fall pigs 335 pounds.

Type studies involving the small, intermediate, and large types of Poland China were continued. Fall-farrowed hogs of the three types were slaughtered on the basis of degree of finish, the small type averaging 145 pounds, the intermediate 221, and the large type 256 pounds at time of slaughter. The three types gained respectively at the rate of 0.94, 1.28, and 1.33 pounds daily from weaning to finish. The small type required approximately 12 percent more feed per unit of gain than either the intermediate or large type.

A summary of results of 5 years' work at Miles City, Mont., in cooperation with the Montana Agricultural Experiment Station, comparing the value of mature sows and gilts for the production of market pigs, shows that pigs from gilts were raised more economically to a marketable weight than were pigs from mature sows. Pigs from gilts showed to advantage in percentage of pigs raised to marketable weight, and also required less feed per pound of marketable weight for the gestation, suckling, and fattening periods. Mature sows, however, were better sucklers, as shown by the fact that their pigs averaged from 7 to 8 pounds heavier at weaning age.

--From Report of the Chief, Bureau of Animal Industry, 1937.

----------oOo----------

It is right to be contented with what we have, never with what we are. --Mackintosh

----------oOo----------

"A man's judgment is never better than his information."

----------oOo----------

NEW PICTURE FEATURES COLLIE DOG

Featuring an alert Border Collie dog guarding a small flock of Shropshire sheep, picture No. 11 of the Bureau of Animal Industry's Livestock-Improvement Series is now available. The new illustration is captioned "Guarding His Master's Flock: Well-trained dogs are efficient and faithful helpers in handling livestock," The picture is considered especially appropriate for 4-H club members engaged in sheep projects.

As in the case of the 10 previous pictures that have been widely distributed through extension channels, the recent addition to the series is intended to show good animals in an attractive setting. The underlying thought is to acquaint the public with the appearance of desirable livestock types, thereby creating interest in their ownership and use. The new picture, like previous ones, measures 15 by 11 3/4 inches, including the border which is a photographic reproduction of an oak frame.

The picture was printed in an edition of 2,000 copies. Copies are available to animal husbandry and extension workers, without cost, so long as the supply lasts. Requests should be sent to the Office of Information, U. S. Department of Agriculture. Arrangements have been made also to include the new illustration in the sales stock of the Superintendent of Documents, Government Printing Office, Washington, D. C.

----------oOo----------

JUST THE BEGINNING

For the best verse hasn't been rhymed yet,
The best house hasn't been planned,
The highest peak hasn't been climbed yet,
The mightiest rivers aren't spanned,
Don't worry, don't fret, faint hearted,
The changes have just begun,
For the best jobs haven't been started,
The best work hasn't been done.

--Berton Braley

----------oOo----------

YOUR DIPPER

Remember then, my friend, and mark it well,
Your dipper, be it copper, silver, clay or gold,
Though you may carry it to overflowing well
Will never, never fetch more than it can hold.

--Selma Hamann

----------oOo----------

"The secret of happiness is not in doing what one likes, but in liking what one has to do."

----------oOo----------

RECENT PUBLICATIONS

(Only Federal publications are available from Washington. Others listed may be obtained in most instances from the institution or agency issuing them. Do not write Washington for other than U.S.D.A. publications).

Federal

"Beef-Cattle Breeds for Beef and for Beef and Milk" by W. H. Black, Bureau of Animal Industry, U.S.D.A., Washington, D. C. - Farmers' Bulletin 1779, pp. 21, illus. 21, Oct. 1937.

"Driven-In Receipts of Livestock, 1937," Bureau of Agricultural Economics, U.S.D.A., Washington, D. C. - 32 page Mimeograph (all tables), Jan. 1938.

"The Feed Grain Situation," Bureau of Agricultural Economics, U.S.D.A., Washington, D. C. - 35 page Mimeograph (mostly tables), Dec. 1937.

"A Graphic Summary of Farm Tenure," by H. A. Turner, Bureau of Agricultural Economics, U.S.D.A., Washington, D.C. - Misc. Pub. 261, Dec. 1936, pp. 52, illus. 71.

"A Graphic Summary of Farm Taxation," by Donald Jackson, Bureau of Agricultural Economics, U.S.D.A., Washington, D.C. - Misc. Pub. 262, Feb. 1937, pp. 17, illus. 24.

"A Graphic Summary of the Value of Farm Property," by B. R. Stauber and M. M. Regan, Bureau of Agricultural Economics, U.S.D.A., Washington, D. C. - Misc. Pub. 263, July 1937, pp. 20, illus. 24.

"A Graphic Summary of Farm Machinery, Facilities, Roads, and Expenditures," by O. E. Baker, Bureau of Agricultural Economics, U.S.D.A., Washington, D.C. - Misc. Pub. 264, July 1937, pp. 33, illus. 53.

"A Graphic Summary of the Number, Size, and Type of Farm, and Value of Products," by O. E. Baker, Bureau of Agricultural Economics, U.S.D.A., Washington, D C. - Misc. Pub. 266, Oct. 1937, pp. 76, illus. 106.

"Internal Parasites of Swine," by Benjamin Schwartz, Bureau of Animal Industry, U.S.D.A., Washington, D.C. - Farmers' Bulletin 1787, Nov. 1937, pp. 46, illus. 38.

"Landlord and Tenant on the Cotton Plantation," by T. J. Woofter, Jr., Division of Social Research, Works Progress Administration, Washington, D.C. 1936. p. 287, with graphs and tables.

"Living Conditions and Population Migration in Four Appalachian Counties," by L. S. Dodson, Farm Security Administration, U.S.D.A., Washington, D.C., - Social Research Report No. III, Oct. 1937. pp. 152, with graphs and tables.

"Material for Use in Connection with Educational Work on Hay," by E. O. Pollock, Extension Service, U.S.D.A., Washington, D. C., Oct. 1937, pp. 25, Mimeographed.

"Mineral Requirements of Livestock," - Bureau of Animal Industry, U.S.D.A., Washington, D.C., A.N.D. No. 2, Oct. 1937, 5 page Mimeograph.

"Report of the Chief of the Bureau of Animal Industry, 1937," - Bureau of Animal Industry, U.S.D.A., Washington, D.C., Sept. 1937. pp. 64.

"A Study of the Possibilities for Improved Methods of Determining and Recording Merit in Sheep," by Keith Jones - Extension Service, U.S.D.A., Washington, D.C., Nov. 1937. pp. 33, illus.

State

"Wool Production and Improvement of the Clip in California," by J. F. Wilson - California Extension Service Circular 106, Nov. 1937, pp. 61, illus. 14.

"Barley as a Feed for Hogs," by E. H. Hughes - California Extension Service Circular 343, Oct. 1937, pp. 8.

"Raising Beef Calves in Indiana," by P. T. Brown - Indiana Extension Service Bulletin 187, June 1937. pp. 16, illus. 7.

"Producing Native Lambs," by Claude Harper - Indiana Experiment Station Bulletin 419, Apr. 1937, pp. 15.

"Swine Feeding Investigations, 1930 to 1935," by C.E. Aubel and W. E. Connell - Kansas Experiment Station Circular 188, Nov. 1937, pp. 26.

"Sheep and Wool Production in Louisiana," by M. G. Snell - Louisiana Experiment Station Circular 20, Aug. 1937, pp. 29, illus. 14.

"How to Use Prairie Hay for Lambs," by D. W. Johnson and L.S. Palmer - Minnesota Extension Service Folder 65, Jan. 1938, illus.

"Effect of Thawing and Cooking Frozen Pork and Beef," by Alice M. Child and Pauline Paul - Minnesota Experiment Station Technical Bulletin 125, Oct. 1937, pp. 11.

"Cutting, Curing, and Canning Pork and Beef," by T. A. Ewing and Flora Carl - Missouri Extension Service Circular 371, Dec. 1937, pp. 8.

"The Use of Native Grass in Producing Finished Cattle," by Marvel L. Baker - Nebraska Experiment Station Bulletin 307, June 1937, pp. 16.

"Beef Cattle Production in the Blackland Area of North Carolina," by J.E. Foster, Earl H. Hostetler, and L.I. Case - North Carolina Experiment Station Bulletin 310, May 1937. pp. 14, illus. 4.

"The Mineral Needs of Farm Animals," - Ohio Experiment Station Special Circular 49, Aug. 1937. pp. 7.

"Meat Identification and Judging," A Manual for 4-H Club Members, by I. B. Johnson - South Dakota Extension Service Circulater 365, May 1937. pp. 16, illus. 11.

"Losses of Vitamin A and Carotene from Feeds During Storage," by G. S. Fraps and A.R. Kemmerer - Texas Experiment Station Bulletin 557, Oct. 1937, pp. 28.

"Toxicity of Bitterweed for Sheep," by I. B. Boughton and W. T. Hardy - Texas Experiment Station Bulletin 552, Aug. 1937, pp. 15.

"Feeding Cattle at the Washington Experiment Station," by Ralph McCall and H. Hackedorn - Washington Experiment Station Bulletin 352, Sept. 1937. pp.22.

Other

"Follow the Proven Way to Greater Profits On Farm and Ranch," - published by National Cottonseed Products Association, Inc., 1411 Santa Fe Bldg., Dallas, Texas. pp. 47, illus.

"Livestock Judging Handbook," by Nordby and Beeson - a practical livestock judging text published by The Interstate Printers and Publishers, Danville, Ill., 1937. pp. 288, well illustrated.

"The Morgan Horse," - published by The Morgan Horse Club, 90 Broad Street, New York, N.Y., pp. 16, illus.

----------oOo----------

"He that would bring home the wealth of the Indies must carry the wealth of the Indies with him. So it is in traveling. A man must carry knowledge with him if he would bring knowledge home."

----------oOo----------